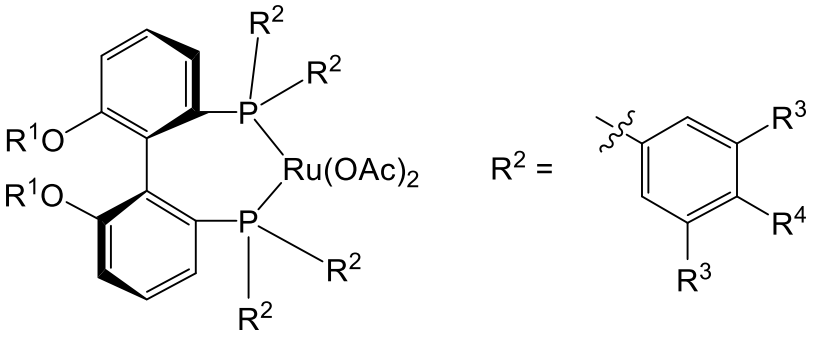
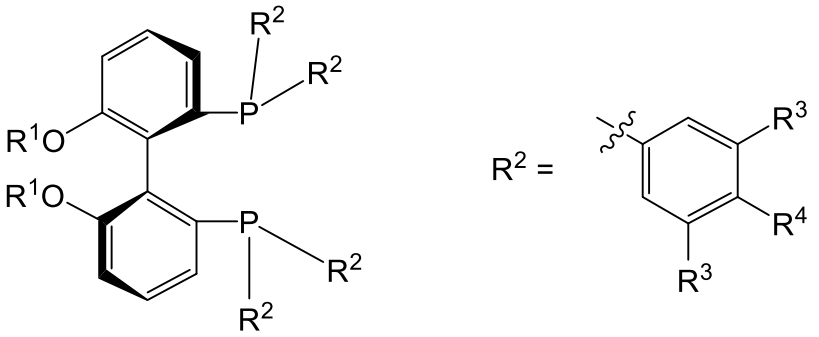


I

wherein R^1 is C_{1-6} alkyl and R^3 is hydrogen or C_{1-6} alkyl and R^4 is hydrogen or C_{1-6}-alkoxy, which comprises the conversion of a phosphine precursor of the formula II



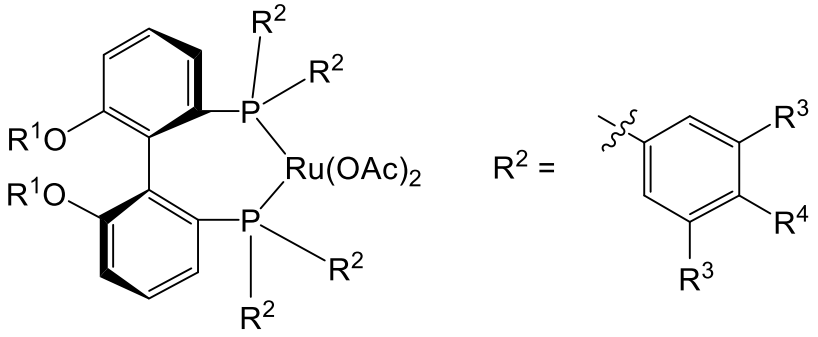
II

wherein R^1, R^3 and R^4 are as above,

with $[Ru(OAc)_2(p\text{-cymene})]$, wherein Ac stands for acetyl,

in the presence of a non-polar solvent at a reaction temperature of 40°C to 110°C.

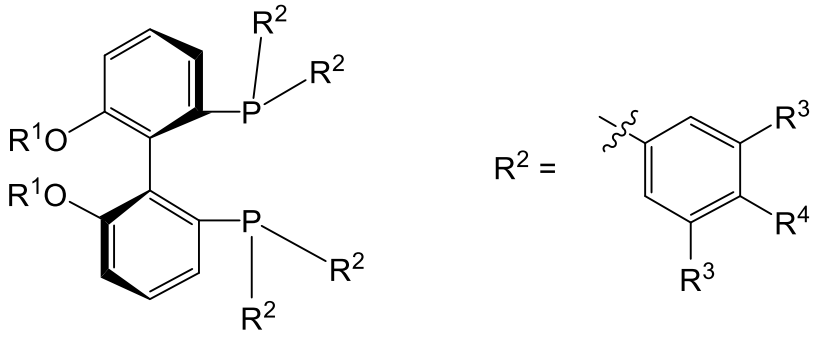
In one aspect, the present disclosure provides a process for the preparation of a [$Ru(OAc)_2$(Ligand)] catalysts of the formula I and its enantiomers,



I

wherein R^1 is C_{1-6} alkyl and $R^3$is hydrogen or C_{1-6} alkyl and R^4 is hydrogen or C_{1-6}-alkoxy,

comprising the conversion of a phosphine precursor of the formula II



II

wherein R^1, R^3 and R^4 are as above,

with $[Ru(OAc)_2(p\text{-cymene})]$, wherein Ac stands for acetyl,

in the presence of a non-polar solvent at a reaction temperature of 40°C to 110°C.

The following definitions are set forth to illustrate and define the meaning and scope of the various terms used to describe the invention herein.

The term C_{1-6}-alkyl stands for a linear or branched alkyl group of 1 to 6 C-atoms. Representatives are methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl or t-butyl, pentyl and its isomers and hexyl and its isomers.